

ABSTRACT

Regenerable gas purifier materials are provided capable of reducing the level of contaminants such as oxygen and moisture in a hydride gas stream to parts-per-billion levels or sub-parts-per-billion levels. The purifier materials of this invention comprise a thin layer of one or more reduced forms of a metal oxide coated on the surface of a nonreactive substrate. The thin layer may further contain the completely reduced form of the metal. In one embodiment, the total surface area of the thin layer is less than 100 m²/g.